

CLAIMS

1. An anti-theft system for a vehicle,
comprising:

5 certifying means of an electronic key for
getting in the vehicle, the means being for certifying the
electronic key held by a person who intends to get in the
vehicle;

human body certification information certifying
10 means, the means being for confirming human body
certification information of the person;

door lock control means for unlocking a vehicle
door in a case where the electronic key is certified by
the certifying means of the electronic key for getting in
15 the vehicle and the human body certification information
of the person is confirmed by the human body certification
information certifying means in a state where the door is
unlocked;

memory means for memorizing ID information of
20 the electronic key when the vehicle door is unlocked by
the door lock control means based on the electronic key
being certified by the certifying means of the electronic
key for getting in the vehicle and the human body
certification information of the person is confirmed by
25 the human body certification information certifying means;

certifying means of an electronic key for
starting an engine, the means being for certifying the
electronic key held by a person who intends to start the
engine; and

30 engine starting control means for starting the
engine of the vehicle in a case where the electronic key
is certified by the certifying means of the electronic key
for starting the engine and the electronic key is an

-50-

electronic key whose ID information is memorized in the memory means , after the vehicle door is unlocked by the door lock control means .

5

2 . The anti-theft system for a vehicle as claimed in claim 1 ,

10 wherein the memory means memorizes, in advance, a maximum number of times for permitting starting the engine after the door is unlocked by the door lock control means , and

15 the engine starting control means allows starting the engine for the permitted maximum number of times memorized in the memory means by the electronic key which is certified by the certifying means of the electronic key for starting the engine and whose ID information is memorized in the memory means, after the
20 door is unlocked by the door lock control means.

25 3 . The anti-theft system for a vehicle as claimed in claim 1 ,

 wherein the memory means memorizes, in advance, a maximum number of times for permitting starting the engine after the door is unlocked by the door lock control
30 means, the maximum number being set for every electronic key which is certified and registered, and

 the engine starting control means allows starting the engine for the permitted maximum number of

-51-

times memorized in the memory means by the electronic key which is certified by the certifying means of the electronic key for starting the engine and whose ID information is memorized in the memory means, the maximum
5 number corresponding to the electronic key and being memorized in the memory means, after the door is unlocked by the door locking control means .

10

4. The anti-theft system for a vehicle as claimed in claim 1,

wherein the memory means memorizes, in advance,
15 a maximum number of times for permitting starting the engine after the door is unlocked by the door lock control means, the maximum number being set for every person who is certified and registered, and

the engine starting control means allows
20 starting the engine for the permitted maximum number of times memorized in the memory means by the electronic key which is certified by the certifying means of the electronic key for starting the engine and whose ID information is memorized in the memory means, the maximum
25 number corresponding to the person whose human body certification information is confirmed by the human body information certifying means at the time when the door is unlocked by the door locking control means , the maximum number being memorized in the memory means, after the door
30 is unlocked by the door locking control means.

-52-

5. The anti-theft system for a vehicle as claimed in claims 2,

wherein the engine starting control means includes permission number reducing means for reducing the
5 number of times of permission for starting the engine by using the electronic key which is certified by the certifying means of the electronic key for starting the engine and whose ID information is memorized in the memory means, when a designated time during which the engine is
10 continued being run passes.

15 6. An anti-theft system for a vehicle, comprising:

certifying means of an electronic key for getting in the vehicle, the means being for certifying the electronic key held by a person who intends to get in the
20 vehicle;

human body certification information certifying means, the means being for confirming human body certification information of the person;

door lock control means for unlocking a vehicle
25 door in a case where the electronic key is certified by the certifying means of the electronic key for getting in the vehicle and the human body certification information of the person is confirmed by the human body certification information certifying means in a state where the door is
30 unlocked;

writing means for writing information that the human body certification information is confirmed in the electronic key as readable or delete-able information,

when the vehicle door is unlocked by the door lock control means based on the electronic key being certified by the certifying means of the electronic key for getting in the vehicle and the human body certification information of
5 the person being confirmed by the human body certification information certifying means ;

certifying means of an electronic key for starting an engine, the means being for certifying the electronic key held by a person who intends to start the
10 engine ; and

engine starting control means for starting the engine of the vehicle in a case where the electronic key is certified by the certifying means of the electronic key for starting the engine and the information that the human
15 body certification information is certified is written in the electronic key, after the vehicle door is unlocked by the door control means .

20

7. An anti-theft system for a vehicle,
comprising:

certifying means of an electronic key for
25 starting a vehicle engine, the means being for certifying the electronic key held by a person who intends to start the vehicle;

human body certification information certifying means , the means being for confirming human body
30 certification information of the person;

engine starting control means for starting the engine in a case where the electronic key is certified by the certifying means of the electronic key for starting

-54-

the engine and the human body certification information of the person is confirmed by the human body certification information certifying means in a state where the engine is stopped running;

- 5 memory means for memorizing ID information of the electronic key when the engine is started by the engine starting control means based on the electronic key being certified by the certifying means of the electronic key for starting the engine and the human body
- 10 certification information of the person being confirmed by the human body certification information certifying means ; certifying means of an electronic key for getting in the vehicle, the means being for certifying the electronic key held by a person who intends to get in the
- 15 vehicle; and
- door locking control means for unlocking the door in a case where the electronic key is certified by the certifying means of the electronic key for getting in the vehicle and the electronic key is an electronic key
- 20 whose ID information is memorized in the memory means, after the engine is started by the engine starting control means .

25

8. The anti-theft system for a vehicle as claimed in claim 7,

- wherein the memory means memorizes, in advance,
- 30 a maximum number of times for permitting unlocking the door after the engine is started by the engine starting control means , and
- the door locking control means allows unlocking

-55-

the door for the permitted maximum number of times
memorized in the memory means by the electronic key which
is certified by the certifying means of the electronic key
for getting in the vehicle and whose ID information is
5 memorized in the memory means, after the engine is started
by the engine starting control means .

10

9. The anti-theft system for a vehicle as
claimed in claim 7,

wherein the memory means memorizes, in advance,
a maximum number of times for permitting unlocking the
15 door after the engine is started by the engine starting
control means , the maximum number of times being set for
every electronic key which is certified and registered,
and

the door locking control means allows unlocking
20 the door for the permitted maximum number of times
memorized in the memory means by the electronic key which
is certified by the certifying means of the electronic key
for getting in the vehicle and whose ID information is
memorized in the memory means, the maximum number
25 corresponding to the electronic key and being memorized in
the memory means , after the vehicle is started by the
engine starting control means .

30

10. The anti-theft system for a vehicle as
claimed in claim 7,

-56-

wherein the memory means memorizes, in advance,
a maximum number of times for permitting unlocking the
door after the engine is started by the engine starting
control means, the maximum number being set for every
5 person who is certified and registered, and
the door locking control means allows unlocking
the door for the permitted maximum number of times
memorized in the memory means by the electronic key which
is certified by the certifying means of the electronic key
10 for getting in the vehicle and whose ID information is
memorized in the memory means, the maximum number
corresponding to the person whose human body certification
information is confirmed by the human body information
certifying means at the time when the engine is started by
15 the engine starting control means, the maximum number
being memorized in the memory means, after the engine is
started by the engine starting control means.

20

11. The anti-theft system for a vehicle as
claimed in one of claim 8,
wherein the door locking control means includes
25 permission number reducing means for reducing the number
of time of permission for unlocking the door by using the
electronic key which is certified by the certifying means
of the electronic key for getting in the vehicle and whose
ID information is memorized in the memory means, when the
30 vehicle door is unlocked and then opened.

-57-

12. An anti-theft system for a vehicle,
comprising:

certifying means of an electronic key for
starting a vehicle engine, the means being for certifying
5 the electronic key held by a person who intends to start
the vehicle;

human body certification information certifying
means, the means being for confirming human body
certification information of the person;

10 engine starting control means for starting the
engine in a case where the electronic key is certified by
the certifying means of the electronic key for starting
the engine and the human body certification information of
the person is confirmed by the human body certification
15 information certifying means in a state where the engine
is stopped running;

writing means for writing information that the
human body certification information is confirmed to the
electronic key as readable or delete-able information,
20 when the engine is started by the engine starting control
means based on the electronic key being certified by the
certifying means of the electronic key for starting the
engine and the human body certification information of the
person being confirmed by the human body certification
25 information certifying means;

certifying means of an electronic key for
getting in the vehicle, the means being for certifying the
electronic key held by a person who intends to get in the
vehicle; and

30 door locking control means for unlocking the
door in a case where the electronic key is certified by
the certifying means of the electronic key for getting in
the vehicle and information that the human body

-58-

certification information is confirmed is written in the electronic key, after the engine is started by the engine starting control means .

5

10

15

20

25

30